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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/416,920	04/21/1995	STEFAN MILTENYI	212302000320	1047

7590 03/25/2005

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EXAMINER	
SCHWADRON, RONALD B	
ART UNIT	**PAPER NUMBER**
1644	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/416,920	MILTENYI ET AL.	
	Examiner	Art Unit	
	Ron Schwadron, Ph.D.	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *71-74,76-111,114-117,119-144 and 147-430* is/are pending in the application.

4a) Of the above claim(s) *108,155-159,223 and 241* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *71-74,76-107,109-111,114-117,119-144,147-154,160-222,224-232,234-240,242-430* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 71-74,76-107,109-111,114-117,119-144,147-154,160-222, 224-232, 234-240,242-430 are under consideration.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 71-74,76-107,109-111,114-117,119-144,147-154,160-222, 224-232, 234-240,242-430 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6,576,428. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons. While the two sets of claims differ in scope (the claims of 6,576,428 are limited to detecting a secreted product secreted by antigen specific T cells versus the instant claims wherein the product can be secreted by any cell), the methods of the instant claims are encompassed by those of claims 1-19 of 6,576,428. The claimed methods not disclosed in 6,576,428 are obvious because they rely on detection of a secreted product using steps disclosed in 6,576,428 plus obvious variations such as quantifying the number of labeled cells, etc. Similarly, the claimed products and kits use reagents found in the methods encompassed by claims 1-19 of U.S. Patent No. 6,576,428. All of the various reagents cited in the claims are

known in the art (magnetic beads for cell separation, antibodies against cytokines, fluorochromes for detecting labeled antibodies, etc).

4. The rejection of claims 151,166,168-171,231,239 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons elaborated in the previous Office Action is withdrawn in view of the amended claims and applicants arguments.

5. The rejection of claims 71-74,76-81,85-87,90-98,101,102,104-107,114-117,119-124,128-138,141-144,147-154,160-179,183-197,201-203,206-213,216,217,219-22,227-232,234-240,242,243,244 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons elaborated in the previous Office Action is withdrawn in view of applicants arguments.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 93-96,101,104,106,107,109,147-149,209-211,216,219,221,222,224,399,400,404,405 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Kohler et al.

Kohler et al. teach direct chemical coupling of TNP to hybridomas which secrete IgM specific for TNP (see section 2.8, page 469), wherein the portion of the TNP

attached to the cell functions as an anchor moiety. Said cells express cell surface markers recited in the claims such as CD45 and MHC class I because the art recognizes that said markers are found on B cells. Kohler et al. teach that said clones are subsequently incubated with specific anti-mouse-υ serum (see page 471, second column, section 3.3). Said serum would bind the captured IgM because IgM contains υ chain. The recitation of a method wherein the instant product is made carries no patentable weight in this product claim because the claimed product is the same as the product of the prior art.

Regarding applicants comments, the recitation of a method wherein the instant product is made carries no patentable weight in this product claim because the claimed product is the same as the product of the prior art. Whilst the composition made by Kohler et al. is not made for the same reasons that the claimed composition is made, it is structurally identical for the reasons recited above.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The previously pending rejection of claims 93-98,100-102,104-107,109-111,147-149,209-213,215-217,219-222,224-226 under 35 U.S.C. § 103 as being unpatentable over Kohler et al in view of Segal (US Patent 4,676,980) and Brennan et al. is withdrawn in view of applicants arguments.

10. The previous pending rejection of claims 150-154,160-166,227-232,234-240,242,243 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler et al in view of Segal (US Patent 4,676,980) and Brennan et al. as applied to claims 93-98,100-102,104-107,109-111,147-149,209-213,215-217,219-222,224-226 above, and

further in view of Zuk et al (U.S. Patent No. 4,281,061) is withdrawn in view of applicants arguments.

11. Claims 150,151,162,165,227,230,235,238,334 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler et al in view of Zuk et al (U.S. Patent No. 4,281,061).

Kohler et al. teach direct chemical coupling of TNP to hybridomas which secrete IgM specific for TNP (see section 2.8, page 469), wherein the portion of the TNP attached to the cell functions as an anchor moiety. Said cells express cell surface markers recited in the claims such as CD45 and MHC class I because the art recognizes that said markers are found on B cells. Kohler et al. teach that said clones are subsequently incubated with specific anti-mouse-υ serum (see page 471, second column, section 3.3). Said serum would bind the captured IgM because IgM contains υ chain. The recitation of a method wherein the instant product is made carries no patentable weight in this product claim because the claimed product is the same as the product of the prior art. The aformentioned steps take place in cell culture media. Zuk et al. teach that reagents for an immunoassay can be provided as kits as a matter of convenience and to optimize the sensitivity of the assay in the range of interest (col 22, line 62 - col 23, line 4). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to include the necessary reagents to perform the immunoassay as per taught by Kohler et al. in a kit format for the convenience and economy of the user as per taught by Zuk et al. The recitation of an intended use carries no patentable weight in the instant kit claims. The instructions for use carry no patentable weight in the instant kit claims (see In Re Ngai (70 USPQ 2D 1862) CAFC).

12. Claims 150-154,160-165,227-230,232,234-238,240,242,243,334,429,430 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klug et al. (WO 89/06544) in view of Bell et al. (US Patent 5,114,711) and Zuk et al (U.S. Patent No. 4,281,061).

The recitation of an intended use carries no patentable weight in the instant kit claims. The instructions for use carry no patentable weight in the instant kit claims (see In Re Ngai (70 USPQ 2D 1862) CAFC). Klug et al. teach a bispecific antibody which binds a cell surface antigen and interferon gamma (see abstract and claims). Klug et al. teach that said bispecific antibody can be formed by chemical ligation of antibody

fragments (see page 9, first paragraph). The cell can be a B cell (see Table I), wherein CD45 is an art known B cell antigen. The cell binding portion of the bispecific antibody constitutes an anchor moiety, whilst the interferon gamma binding portion constitutes a capture moiety. Klug et al. does not teach the bispecific antibody in a kit or the other components in the kit. Klug et al. disclose that it is necessary to test the bispecific antibody to insure that it binds gamma interferon (see page 14, last paragraph, continued on next page). Bell et al. teach that the presence of interferon gamma can be measured in a art known ELISA assay using an antigen capture antibody and an antibody against interferon gamma (column 12, third paragraph). The gamma interferon bound by the bifunctional antibody could have been measured using any art known assay for gamma interferon. The interferon/bifunctional antibody complex would function as a capture system as per the ELISA assay taught by Bell et al. Zuk et al. teach that reagents for an immunoassay can be provided as kits as a matter of convenience and to optimize the sensitivity of the assay in the range of interest (col 22. line 62 - col 23, line 4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because Klug et al. teach a bispecific antibody which binds a cell surface antigen and interferon gamma and that it is necessary to test the bispecific antibody to insure that it binds gamma interferon whilst Bell et al. teach that the presence of interferon gamma can be measured in an art known ELISA assay using an antigen capture antibody and an antibody against interferon gamma wherein the gamma interferon bound by the bifunctional antibody could have been measured using any art known assay for gamma interferon and wherein interferon/bifunctional antibody complex would function as a capture system as per the ELISA assay taught by Bell et al., whilst Zuk et al. teach that reagents for an immunoassay can be provided as kits as a matter of convenience and to optimize the sensitivity of the assay in the range of interest. One of ordinary skill in the art would have been motivated to do the aformentioned because Zuk et al. teach that reagents for an immunoassay can be provided as kits as a matter of convenience and to optimize the sensitivity of the assay in the range of interest and the ability of the bispecific antibody to bind interferon gamma could have been measured using any art known assay. ELISA assays using fluorochrome labeled antibodies are well known in the art.

13. Claims 16,231,239 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klug et al. (WO 89/06544) in view of Bell et al. (US Patent 5,114,711) and Zuk et al (U.S. Patent No. 4,281,061) as applied to claims 150-154,160-165,227-230,232,234-238,240,242,243,,334,429,430 above, and further in view of Segal (US Patent 4,676,980).

The previous rejection renders obvious the claimed kit except for bispecific antibodies made using biotin/avidin conjugation. Segal discloses that bispecific antibodies can be made using biotin/avidin conjugation (see column 5). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because previous rejection renders obvious the claimed kit except for bispecific antibodies made using biotin/avidin conjugation. Segal discloses that bispecific antibodies can be made using biotin/avidin conjugation. One of ordinary skill in the art would have been motivated to do so because said method is an art recognized method for making bispecific antibodies.

14. No claim is allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron Schwadron, Ph.D. whose telephone number is 571 272-0851. The examiner can normally be reached on Monday-Thursday 7:30-6:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 571 272-0841. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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